Fanless 1-litre PC suitable for 24/7 operation

The XS35V4 is the new model in Shuttle's successful XS35 range. This fanless Slim PC barebone comes with an energy-efficient Intel Celeron J1900 Quad Core processor and is designed for building particularly slim nettops with drives and operating system as well as for purely network-based applications in client/server environments. The integrated graphics is based on Intel's powerful HD Graphics (7th gen) supporting hardware acceration for Full HD video encoding/decoding. The XS35V4 is completely fanless which helps cut down on operating noise and expensive servicing, as there are no moving parts inside the machine. Equipped with the relevant hard drives or SSDs, the XS35V4 is suitable for continuous 24/7 operation.

Barebone XS35V4

Slim PC

nonstop 24/7

Fanless

Feature Highlights

Chassis	• Slim 1.5 litre chassis • Dimensions: 25.2 x 16.2 x 3.85 cm • Hole for the Kensington Lock • Optional: VESA75/100 mounting kit PV01
Operating System	• Without operating system • Compatible with Windows 8 / 8.1 (64 bit) and Windows 7 (64 bit) **[2]**
CPU	• Intel Celeron J1900, Quad Core (2 GHz)
Graphics	• Integrated Intel HD Graphics (7th gen) • Supports DX11 and 1080p Full-HD Video
Memory	• 1x SO-DIMM socket (204 pins) • Max. size: 8 GB DDR3L-1333 (1.35V) Supports DDR3L-1600 at 1333 MHz
Storage	• Supports one 2.5" SATA hard disk or SSD • Supports one optical slimline drive (or otherwise a second 2.5" drive in the ODD bay with the optional accessory PHD2N) • With SD card reader (SD/SDHC/SDXC)
Connectors and WLAN	• 3 video ports: HDMI, DisplayPort, D-Sub • 1x USB 3.0, 3x USB 2.0, internal: USB 2.0 • 2x Audio (mic, head phone) • Gigabit-LAN, WLAN 802.11 b/g/n
Power Supply	• External 40 W fanless power adapter
Applications	• Office, Home Media, Digital Signage...

Images are for illustration purposes only.
The optical drive is not included.
Shuttle Order-No. PEB-XS35U401

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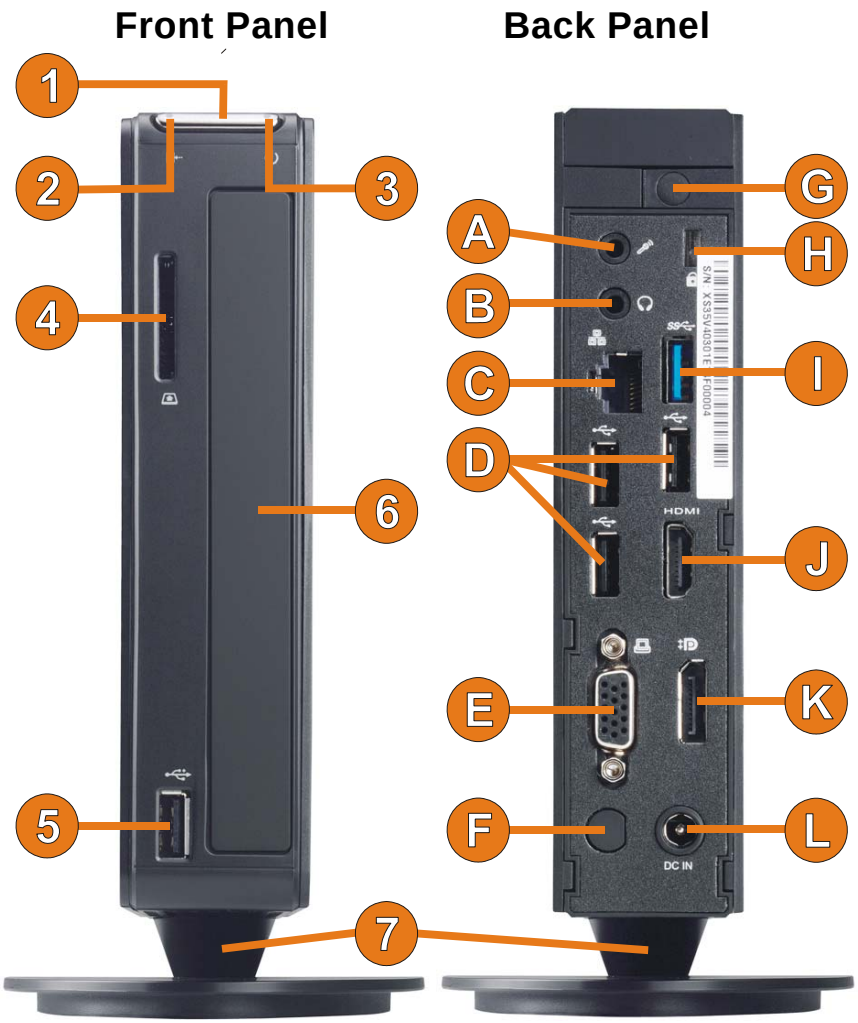
Shuttle Slim PC Barebone XS35V4 – Connectors



1	Power button	**A**	Microphone input	**I**	USB 3.0 connector
2	Power LED	**B**	Head phone output (Line out)	**J**	HDMI connector
3	Hard disk LED	**C**	Gigabit LAN connector (RJ45)	**K**	DisplayPort connector
4	SD card reader	**D**	3x USB 2.0 connectors	**L**	DC input for the power adapter
5	USB 2.0 connector	**E**	D-Sub/VGA connector		
6	Bay for the optical slimline drive *)	**F**	Perforation for optional connector		
7	Vertical stand	**G**	One screw to open the chassis		
		H	Hole for the Kensington-Lock		

*) Note: The optical drive is not included.

Notice:
Please make sure the system is always operated in upright position using either its stand or the optional VESA mount. Ventilation holes must not be blocked to ensure sufficient cooling.

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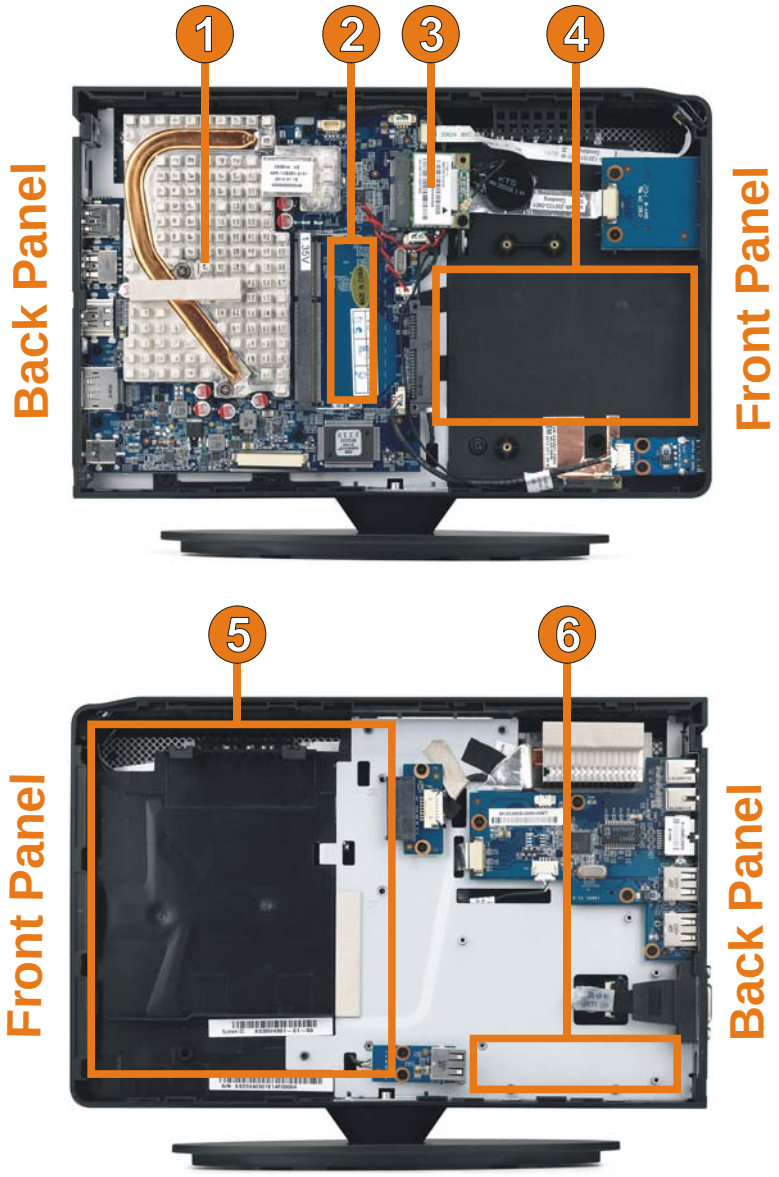
Shuttle Slim PC Barebone XS35V4 – Side View



1 Heat- pipe cooling system
2 SO-DIMM slot for one DDR3L module
3 Half-Size WLAN module
4 2.5” drive bay with SATA connector (find the drive bracket in the accessory box)
5 5.25 Slim drive bay for an optical drvie with SATA connector
6 Slot for a USB stick

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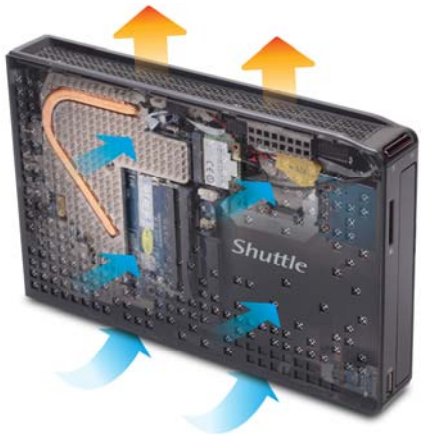
Shuttle Slim PC Barebone XS35V4 - Product Features

Slim and stylish

Designed as a space-saver, this sleek 1.5 litre nettop PC only measures 3.8cm in width. It maximizes space whether it is placed upright using its stylish stand or affixed to the back of a monitor with the optional VESA mounting kit (PV01). Due to its small size and flexible design, this practical nettop offers exceptional functionality and is well-suited for home users, small offices, reception areas, classrooms, libraries, showrooms, call centres, public institutions and more.



Fanless and quiet

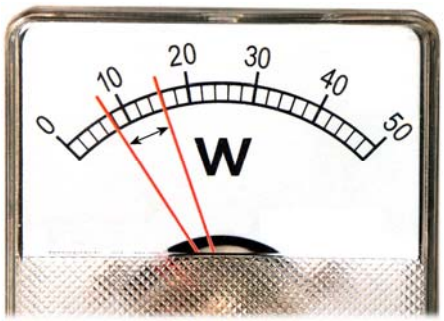
The Shuttle Slim PC Barebone XS35V4 uses a passive thermal module with heat pipes to transmit heat throughout the system quickly and evenly. The unique fanless design making it perfect to be used in noise-sensitive environments such as living rooms, hospitals, libraries etc. As an additional benefit, fanless cases rarely gather dust on the inside and stay cleaner than others. So it's not only quiet and low in energy use, but also dust-free and virtually maintenance free.

24/7 nonstop operation

The Shuttle Slim PC Barebone XS35V4 is officially approved for 24/7 permanent operation. Thanks to its low power consumption and completely passively cooling, this PC runs highly reliably making it perfectly suitable for digital signage and POI/POS applications.

<u>Conditions for permanent use:</u>

- Ambient temperature while under load: 5-35°C
- Air humidity while under load: 10-90% (not condensing)
- Free circulation of air amongst the PC must be guaranteed
- Ventilation holes must be clear
- If a hard disk is installed, this must also be approved for permanent operation by its manufacturer (max. one hard disk)



Highly energy-saving

The Shuttle Slim PC Barebone XS35V4 barely consumes, depending on system load, about 7.5~15.4 Watts. Running the device*) 5 days a week for eight hours a day, the annual consumption would amount to approx. 16~32 kWh which would mean just 4~8 Euros on the power bill (25 Euro ct/kWh) - way less than a conventional desktop PC draws.
*) Based on a configuration with 4 GB of memory, 120 GB SSD and Windows 8.1 64 bit.

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What does "Barebone" mean?

Shuttle's barebones line such as the Shuttle Slim PC Barebone XS35V4 is targeted at experienced users seeking to build a complete system to meet their individual requirements. The bulk of components is yet built in, simply the following hardware is to be installed upon purchase in this case:

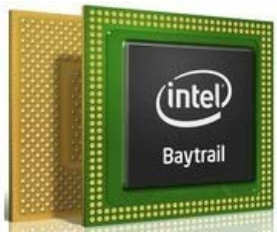
- One 6.35 cm/2.5" Serial ATA hard disk or Solid State Disk (SSD)
- One DDR3L SO-DIMM memory module (204 pins), max. 8 GB
- USB keyboard and USB mouse
- Optional: Slim-line optical drive (12.7mm height, DVD/Blu-ray, slimline format)
- Operating system

Easy installation

Remove just one screw to unmount the two chassis covers.

Optional VESA mount (Accessory PV01)

Its optional VESA75/100 mount allows it to be installed on to walls or just affixed on the rear side of a monitor which is particularly interesting for the industry segment, company buildings and public institutions.



Celeron J1900 – energy efficient Quad Core CPU

The Shuttle Slim PC Barebone XS35V4 is equipped with Intel's Celeron J1900 processor which is a power efficient System-on-a-Chip (SoC) from the Bay Trail-D family of the Silvermont processor microarchitecture. Thanks to the optimized 22 nanometer process, four x86-64 CPU cores and a clock speed of 2.0-2.42 GHz (Burst), energy efficiency and performance have been significantly improved compared to its predecessors, e.g. the Intel Atom D2550.

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Supports Blu-ray playback

The integrated graphics chip is based on the Intel HD Graphics (7th gen) architecture which supports DirectX 11 and is also found in the Ivy Bridge series (e.g. HD Graphics 4000). It offers generous performance for most home, office and digital signage applications. It features a wide variety of multimedia features such as H.264 hardware decoding, support for 1080p full HD video, Blu-ray playback and 8-channel HD audio through HDMI and DisplayPort (DP).

Two monitor support with HDMI, DisplayPort and VGA

The Shuttle Slim PC Barebone XS35V4 supports multiple displays connected through HDMI (DVI through optional adapter), DisplayPort (DP) and D-Sub/VGA. This improves the user's capability and productivity by allowing for spreading multiple windows across two monitors and view them simultaneously.

USB 3.0 SuperSpeed connector

The Shuttle Slim PC Barebone XS35V4 has one built-in USB 3.0 port at the rear panel. USB 3.0 "SuperSpeed" provides a significant performance increase over previous USB generations making it the ideal interface solution for demanding, external peripherals. USB 3.0 supports up to 5Gb/s full duplex which means up to 10 times greater performance over USB 2.0. It also provides higher power and is backwards compatible with USB 2.0.

SD card reader

The built-in SD card reader at the front makes it easy to transfer files from your camera so you can share videos and photos on your Shuttle Slim PC Barebone XS35V4 with ease.

Internal USB connector

The Shuttle Slim PC Barebone XS35V4 features an internal USB 2.0 Type-A connector supporting a variety of USB sticks such as flash memory, 3G function, DVB-T TV tuner and others.
The chassis also provides a perforation (9mm hole) for an external antenna or additional connector.
In the picture you can see a conventional USB stick as an internal boot device.

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Kensington Lock

This is a small, metal-reinforced hole as part of an anti-theft system. As known from notebooks, this Slim PC can also be safely locked by tieing it to a solid object.
(The lock-and-cable not included.)

Optional second disk (Accessory PHD2N)

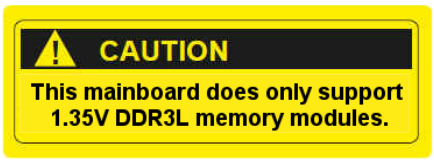
The optional accessory PHD2N makes for support of a second 2.5" hard disk or SSD. Please note that the bay for the optical drive will be occupied then and cannot be used.

Tiny power adapter

The external 40W power adapter is virtually noiseless and can easily be hidden behind the desk thanks to its tiny dimensions.
Dimensions: 89.5 x 37 x 26.5 mm (LWH) = 88ml

Watchdog — protecting system security

The built-in Watchdog Timer provides excellent security protection for systems that need to operate continuously for a long period of time. Use Shuttle's Watch Dog utility to maintain normal operation and stability of the system at all times. If, due to a hardware failure or program error, this utility fails to restart the watchdog, the timer will elapse and generate a hardware reset and reboot the system.



Supports Energy-Efficient DDR3L memory only

Please note that this PC does only support 1.35V DDR3L memory modules. DDR3L has a lower operation voltage compared to DDR3 and draws less power without compromising on performance or reliability.

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Shuttle Slim PC Barebone XS35V4 Specifications

Fanless and silent	Completely fanless, no fan noise at all Passive cooling through convective heat transfer Perfect to be used in noise-sensitive environments Fanless means less dust and thus virtually no maintenance required Notice: Please make sure the system is always operated in upright position using either its stand or the optional VESA mount. Ventilation holes must not be blocked to ensure sufficient cooling.
Low Power Consumption	Power consumption: ca. 7.5 W (idle mode) and ca. 15.4 W (full load) (Configuration: 4 GB RAM, 120 GB SSD and Windows 8.1)
Chassis	Dimensions without stand: 25.2 x 16.2 x 3.85 cm (DxHxW) = 1.57 L Weight: 2.1 kg net, 2.8 kg gross Hole for Kensington Lock at the back panel Optional accessory: 75mm and 100mm VESA mounting kit (PV01)
Operation System	This system comes without operating system. It is compatible with Windows 8 / 8.1 (64 bit) and Windows 7 (64 bit) **[2]**
Processor	Intel Celeron J1900, Quad Core CPU clock frequency: 2.00 GHz, max. Turbo frequency: 2.42 GHz Silvermont architecture, Bay Trail-D platform, 22nm structure CPU cores/Threads: 4/4 Cache: 2 MB Thermal Design Power (TDP): 10W SOC design with integrated graphics processor
Integrated Graphics	The Graphics Processing Unit (GPU) is integrated into the processor Intel HD Graphics (7th gen), graphics frequency: 688~854 MHz Supports DirectX 11.0, OpenGL 4.0, OpenCL 1.2, HDCP 1.3 (Blu-ray) Execution Units (EU): 4 Three video outputs: - HDMI: max. 1920x1200 resolution @ 60Hz - DisplayPort: max. 2560x1600 resolution @ 60Hz - D-Sub (VGA): max. 1920x1200 resolution @ 60Hz Dual display: supports max. two independent displays Full hardware acceleration: - for decode: H.264, MPEG2, MVC, VC-1, VP8, MJPEG - for encode: H.264, MPEG2, MVC
UEFI Firmware	8Mbit Flash ROM with AMI's Aptio UEFI BIOS Firmware Based on the Unified Extensible Firmware Interface (UEFI) Supports Power fail resume / AC power on state / always on / always off Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states Supports boot up from external flash memory cards

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Memory	1x SO-DIMM slot with 204 pins Supports one module DDR3L-1333 (PC3-10600) at 1.35V Maximum capacity: 8 GB DDR3L-1600 is supported at DDR3L-1333 clock rate Caution: This mainboard does only support 1.35V DDR3L memory modules. Note: DDR3L has a lower operation voltage compared to DDR3
Optical Drive (opt.)	Supports an optical DVD or Blu-ray slimline drive Serial ATA interface, 12.7 mm height, Slimline SATA connector
Hard disk drive or SSD	Supports one Serial ATA hard disk (5400 / 7200 rpm) or one SATA SSD drive in 6.35cm/2.5" format Serial ATA II Interface with up to 300 MB/s transfer speed Supports a drive with max. 9.5 mm height Supports Unified Extensible Firmware Interface (UEFI)
Integrated Audio	Realtek ALC269 Audio Codec with Azalia and D3 mode support Two analog audio connectors (3.5mm): 1) Line out (head phone) 2) Microphone input
Card Reader	Integrated card reader supports SD, SDHC and SDXC memory flash cards
Wired Network	RJ45 connector supports Gigabit-LAN at 10/100/1000 Mbit/sec. Network controller Realtek RTL8411 Supports Wake-on-LAN (WOL) from S3, S3, S5 ACPI states
Wireless Network	Half-size Mini PCIe card with RTL8188EE chip Supports IEEE 802.11b/g/n, max. 150Mbps up-/downstream Security: WPA/WPA2(-PSK), WEP 64/128bit, IEEE 802.11x/i
LEDs and Buttons	Power button Power LED (blue)
Front Panel Connectors	1x USB 2.0 SD card reader
Back Panel Connectors	HDMI, digital video and audio output DisplayPort, digital video and audio output D-Sub/ VGA, analog video output (15 pin) 1x USB 3.0 3x USB 2.0 Gigabit network (LAN, RJ45) Audio Line-out (head phone) Microphone input DC input for the external power adapter Perforation for TV antenna (diameter: 9 mm)

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Internal USB Connector	Internal USB 2.0 Type-A connector for USB dongle (for e.g. memory stick, 3G stick, DVB-T stick, etc.) Supports booting from an internal USB memory stick.
Power Supply	External 40W AC/DC power adapter (fanless), 19V / 2.1A AC Input: 100~240V AC, 50~60Hz Automatic voltage adjust Dimensions: 89.5 x 37 x 26.5 mm (LWH) DC Connector: 5.5/2.5mm (outer/inner diameter)
Optional Accessories	Optional Accessories - VESA mount made of metal (PV01) - Adapter for second 2.5" drive instead of optical drive (PHD2N)
24/7 nonstop operation	This device is approved for 24/7 permanent operation. Requirements: - Free circulation of air amongst the PC must be guaranteed. - Ventilation holes must be clear. - Any installed hard disk must also be approved for permanent operation by its manufacturer (max. one hard disk)
Environ-mental spec.	Operating temperature range: 0~35°C Relative humidity range: 10~90% (non-condensing)
Certification and Compliance	EMI: CE, FCC, BSMI, C-Tick, CCC Safety: CB, BSMI, ETL Other compliances: RoHS, Eup Lot6 This device is classed as a technical information equipment (ITE) in class B and is intended for use in living room and office. The CE-mark approves the conformity by the EU-guidelines: - EMV-guideline 89/336/EWG electromagnetic tolerance - LVD-guideline 73/23/EWG use of electric devices within certain voltage-limits

[1] UEFI-Firmware (versus BIOS)
Just as many modern PCs, the XS35V4 does away completely with a BIOS, but uses a pure *) UEFI firmware instead. The terms UEFI firmware and BIOS are widely used synonymously, but hardware initialising is now performed by the UEFI. Users might not even notice, but the operating system must be installed and executed in UEFI mode. UEFI creates a GUID Partition Table (GPT) on the system partition instead of a Master Boot Record (MBR). On a PC running a pure UEFI firmware alone, must be a 64-bit operating system installed.
*) Notice: In transition period from BIOS to UEFI mainboard manufacturers still used to employ a traditional BIOS for compatibility reasons. Thanks to the integrated "Compatibility Support Module" (CSM), older Windows versions could boot from mainboards with a UEFI firmware.

[2] Windows 7 64-bit is supported since BIOS version XS35V400.110. If a BIOS update is required, the built-in UEFI shell must be used. Please refer to the FAQ section on the Shuttle website for more information on this matter. Prior to the installation of Windows 7, the BIOS must be entered and "Windows 7" must be selected as the operating system under "Boot", "OS-Selection".

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Shuttle Slim PC Barebones XS35/XS36 Series – A History

XS35 Series

Supports Slimline-DVD drive

XS36 Series

Supports two serial ports

Model	Graphics	Graphics output	USB 3.0	COM	WOL [3]	ODD [4]	Processor	Memory	LAN
XS35	Intel GMA3150	D-Sub	-	-	-	Yes	**Atom D510** (1.66 GHz) "Pineview	**Max. 2 GB** DDR2-800 [6] 1x SO-DIMM	100
XS35GT	NVIDIA ION2	D-Sub, HDMI	-	-	-	Yes			
XS35V2	Intel GMA3150	D-Sub	-	-	-	Yes	**Atom D525** (1.80 GHz) "Pineview	**Max. 4 GB** DDR3-800 [6] 1x SO-DIMM	Giga
XS35GT V2	NVIDIA ION2	D-Sub, HDMI	-	-	-	Yes			
XS35GTA V2	ATI Mobility Rad. HD 5430	D-Sub, HDMI	-	-	-	Yes			
XS35GS V2	ATI Radeon HD 7410M	D-Sub, HDMI	-	-	-	Yes			
XS35V3(L)	Intel GMA3650 [2]	D-Sub, HDMI	-	-	Yes	Yes	**Atom D2700** (2.13 GHz) "Cedarview"	**Max. 4 GB** DDR3-1066 [6] 2x SO-DIMM	Giga
XS35GTA V3 XS35GS V3 [1]	ATI Radeon HD 7410M	D-Sub, HDMI	-	-	Yes	Yes			
XS36V	Intel GMA3650 [2]	D-Sub, HDMI, DVI	-	**2x**	Yes	-			
XS35GS V3L	ATI Radeon HD 7410M/7450[7]	D-Sub, HDMI	-	-	Yes	Yes	**Atom D2550** (1.86 GHz) [5] "Cedarview"		
XS36VL	Intel GMA3650 [2]	D-Sub, HDMI, DVI	-	**2x**	Yes	-			
XS35V4	Intel HD Graphics (7th gen)	D-Sub, HDMI, DisplayPort	Yes	-	Yes	Yes	**Celeron J1900** (2.00 GHz) "Bay Trail"	**Max. 8 GB** DDR3L-1333 1x SO-DIMM	Giga
XS36V4	Intel HD Graphics (7th gen)	D-Sub, HDMI, DisplayPort	Yes	**2x** [8]	Yes	-			

[1] **XS35GTAV3** is called **XS35GS V3** outside EU.
[2] Intel offers sophisticated graphics drivers for the integrated Intel GMA3650 graphics for Windows 7 32 bit only.
[3] Supports Wake-on-LAN (WOL), Power fail resume (always on/off) and Resume by RTC Alarm
[4] "ODD" means a 5.25" bay for an optical drive in slimline format
[5] In 2012, Intel phased out the Atom D2700 processor and introduced the D2550 as its successor.
[6] DDR3-1333 is supported at DDR3-1066 or DDR3-800 clock rate respectively.
[7] XS35GSV3L: In the beginning of 2014, the GPU was updated from HD 7410M to HD 7450.
[8] XS36V4 provides two serial RS232 ports which both support 0V/5V/12V. The upper port is switchable to RS422 / RS485.

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